ABSTRACT

EFFECT OF COOKING PROCESS ON PHYTOSTEROL CONTENT IN VELVET BEAN (*Mucuna pruriens*)

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The aims of this study were to evaluate the effect of cooking process on phytosterol content in velvet bean (*Mucuna pruriens*) and to identify phytosterols in raw and boiled velvet bean using gas chromatography-mass spectrometry (GC-MS). The velvet bean was extracted by *n*-hexane, acetone, and chloroform. It was analyzed by *Agilent 6890N Network GC Series GC System*, with a Mass Spectrum Detector (MSD) and a column HP-5MS (*5% Phenyl 95% Methyl Siloxane*), and optimal conditions were obtained by using temperature of inlet and detector of 290°C while the oven temperature was programmed of 220°C hold for one minute then increase for 10°C every minutes to 270°C hold for 15 minutes. The split ratio was achieved at 1:10 and the injection volume was 0.6 µl. The results of this study showed that velvet bean contain phytosterol, identified as kampesterol, stigmasterol, and β-sitosterol, cooking process has no effect on kind of phytosterols in velvet bean.

Keyword : *Mucuna pruriens*, gas chromathography-mass spectrometry, phytosterol, cooking process